FINAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFIC OF THE STATEWIDE HEALTH PLANNING AND DEVELOPMENT

REGARDING THE CALIFORNIA MECHANICAL CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a final statement of reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

UPDATES TO THE INITIAL STATEMENT OF REASONS

Updated Initial Statement of Reasons is as follows:

TITLE 24, PART 4, CALIFORNIA MECHANICAL CODE

Section 203 – A

Purpose: The current code does not recognize the difference between exhaust air which is contaminated with odors and other contaminants and building relief air which is not contaminated. To require 25 feet separation between clean relief air discharge and outside air intakes is excessive and adds unnecessary cost and restrictions to some projects.

Rationale: To recognize the difference between the exhaust air which is contaminated and building relief air which is not contaminated.

Section 316.5

Purpose: Equipment control systems must also have emergency power supplied to them if they serve any equipment that is required to be provided with emergency power by Section 316. Without the controls being on emergency power, equipment that is required to be on emergency power will not function properly.

Rationale: To provide emergency power to the control system of equipment that is required to be connected to the emergency power.

Section 407.2.1

Purpose: The current code language only requires outside air intakes that penetrate through the roof to have a minimum clearance dimension above the roof itself. However, for roof mounted air handlers, outside air intakes are mounted directly on the air handling equipment (above the roof) and do not pass through the roof, thus the minimum clearance from the roof is not enforceable. Both the 1999 ASHRAE Applications Handbook Ch.7 (page 7.2) and the 1996-97 AIA Guidelines for Design and Construction of Hospital and Health Care Facilities Section 7.31.D3 (page 50) clearly require all outside air intakes on central systems to have a minimum clearance above the roof, not just those that pass through a roof. To keep dirt and contaminants on the roof from entering outside air intakes less than 18” above the roof, pre-filters could be installed on outside air intakes to preserve air quality

Rationale: To keep dirt and contaminants on the roof from entering outside air intakes less than 18” above the roof.

Section 407.2.3

Purpose: The current code requires building relief air to be discharged at least 25 feet away from outside air intakes because the code does not distinguish between dirty, contaminated exhaust air and clean relief air which is not contaminated and could otherwise be used as return air in the building. Requiring 25 feet separation between clean building relief air discharges and outside air intakes is excessive and adds unnecessary costs and restrictions to some projects.

Rationale: Requiring 25 feet separation between clean building relief air discharges and outside air intakes is excessive and adds costs and restrictions to some projects.

Section 407.4.1

Purpose: Existing California amendment used the term “changes.” This is a typographical error, and should read “chances.”

Rationale: Correct a typographical error in the existing amendment.

Section 407.4.1.3

Purpose: Rooms requiring either a positive or negative air balance per Table 4-A or Table 4-C inherently cause airflow either into or out of the corridor which serves that room. When the room is directly served by a corridor requiring fire resistive construction, this creates a conflict between California Mechanical Code (CMC), Table 4-A or Table 4-C and Sections 407.4.1.3 and 602.1 which prohibit the corridor from conveying air to or from a room when the corridor is of fire resistive construction. This exception will clarify that airflow required by CMC Table 4-A or Table 4-C to establish a positive or negative air balance is not to be construed as a code violation. “Return” is added to “supply air” and “exhaust air,” since the transfer of return air also is not allowed. Also, a part of the text was editorially changed to an exception, with no change in meaning or application.

Rationale: This exception will clarify that airflow required by CMC, Table 4-A or Table 4-C to establish a positive or negative air balance is not to be construed as a code violation.

Section 407.4.1.5

Purpose: Air should not be transferred directly from one room to another room in patient areas of health facilities. Requiring any transferred air to be properly filtered will greatly minimize the risk of spreading germs and illness throughout the building.

Rationale: Requiring any transferred air to be properly filtered will greatly minimize the risk of spreading germs and illness throughout the building.

Section 407.4.1.6

Purpose: When supply and return air registers are located such that air is directed to return path without circulating in the room short circuiting will occur. Short-circuiting of supply air

reduces the effectiveness of the ventilation required by CMC, Table 4-A. Current code language does not prohibit such short-circuiting of supply air.

Rationale: Short-circuiting of supply air reduces the effectiveness of the ventilation required by CMC, Table 4-A.

Section 410

Purpose: The current code language requiring a separate exhaust system for lab hoods is poorly worded and is subject to differing interpretations. The wording in CMC, 410.2 states "… each (hood) shall have an independent exhaust system." The code clearly states that each hood shall have an independent exhaust system, but it does not make clear what it is to be independent of. The most common interpretation is that lab exhaust hoods shall be independent of the general building exhaust system. Another interpretation is that when multiple lab hoods are installed, each lab hood shall have an exhaust system independent of the other hoods.

Rationale: Laboratory exhaust hoods shall be independent of the general building exhaust system.

Section 602.1

Purpose: Rooms requiring either a positive or negative air balance per Table 4-A inherently cause airflow either into or out of the corridor which serves that room. When the room is directly served by a corridor requiring fire resistive construction, this creates a conflict between CMC, Table 4-A and Sections 407.4.1.3 and 602.1 which prohibit the corridor from conveying air to or from a room when the corridor is of fire resistive construction. This exception will clarify that airflow required by CMC Table 4-A to establish a positive or negative air balance is not to be construed as a code violation.

Rationale: This exception will clarify that airflow required by CMC, Table 4-A to establish a positive or negative air balance is not to be construed as a code violation.

Section 1131.1

Purpose: Current clearance of 20 feet required by CMC, 1131.1 is in conflict with CMC, 407.2.1 which requires 25 feet clearance.

Rationale: This will clarify a conflict between two sections of the code.

Table 4-A

Purpose:

- Footnote 8 is being added to provide a minimum requirement for positive or negative air balances.
- Footnote 9 is being added to require exhaust air over a toilet or bedpan washing fixture in Intensive Care Units.
- Number of air changes for ventilation is increased for emergency department waiting room, patient room and labor/delivery/recovery (LDR) room.

Rationale: Table 4-A currently requires a positive or negative air balance in several rooms, but there is no minimum requirement to establish this positive or negative air balance. If the

differential between the supply and return or exhaust air is not sufficient, the required pressure relationship may not be achieved.

Toilet fixtures in intensive care units are often not in a separate room, but are located in the patient space. Exhaust air over the toilet or bedpan fixture is necessary to prevent odors from being returned to the Intensive Care Unit air handling system. This amendment will capture most of the odor from the toilet and exhaust it, while allowing the majority of the room air to be returned to the air handler.

This amendment is intended to coordinate the requirements of Table 4-A with the AIA Guidelines for the Design and Construction of Hospital and Health Care Facilities

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TITLE 24, PART 2, CALIFORNIA BUILDING CODE

Section 1202.2.1

The Office is proposing to modify California Building Code (CBC), Section 1202.2.1 in response to comments received regarding this OSHPD 2/02 proposed rulemaking (refer to Comments #2 and #3 of this Final Statement of Reasons document). The proposed modifications will resolve a conflict between the CBC and CMC and are shown in the "Express Terms" document of this rulemaking.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

The Office of Statewide Health Planning and Development has determined that the proposed regulatory action would not impose a mandate on local agencies or school districts.

OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).

The OSHPD received several comments from one commentor, Mr. Shlomo Rosenfeld a mechanical engineer and past member of the Hospital Building Safety Board. His comments and the Office's responses are listed below:

Comment #1: The commentor states that the current California Mechanical Code (CMC), Section 407.4.1.3 and Section 602.1, Exception 1, allows for ventilating toilet rooms under 30 square feet by transferring air from corridor. Unfortunately, due to American Disability Act (ADA) requirements there are no more single toilet rooms under 30 square foot which open to the corridor. The commentor proposes increasing the 30 square feet requirement to 50 square feet and he lists possible problems with not expanding to 50 square feet.

Response #1: The Office of the State Fire Marshal (SFM) has objected to this change in the past and the reason given was that this change would increase the smoke hazard in corridors. The OSHPD is planning to further discuss this issue with the SFM and possibly propose a change to this section in a future code adoption cycle.

Comment #2: The commentor states that California Building Code (CBC), Chapter 12, Section 1202.2.1 requires 4 air changes per hour in toilet rooms. The adoption table for CBC, Chapter 12

indicates that this chapter is adopted by OSHPD (for OSHPD 1, 2, 3 & 4 health facilities) in its entirety (without amendments). In contrast, the Office adopts CMC, Table 4A which requires 10 air changes per hour in toilet rooms. The commentor questions which air change requirement should be used for health facilities.

Response #2: In order to address the commentor's concerns regarding the conflict between the CBC and the CMC, the Office is proposing to amend CBC, Section 1202.2.1 to make reference to CMC, Table 4-A for requirements that apply to health facilities. Additionally, the Adoption Matrix Table for CBC, Chapter 12 will be modified to indicate that OSHPD adopts the entire Uniform Building Code (UBC), Chapter 12, as amended in Section 1202.2.1, for OSHPD 1, 2, 3 & 4 health facilities.

Comment #3: The commentor states that CBC, Chapter 12, Section 1202.1 requires that the point of exhaust discharge be at least 3 feet from any opening that allows air to enter into occupied areas of the building. The adoption table for CBC, Chapter 12 currently indicates that this chapter is adopted by OSHPD (for OSHPD 1, 2, 3 & 4 health facilities). In contrast, the Office adopts the CMC, Section 407.2.2 which requires point of exhaust discharge at least 10 feet from any opening of air entry. The commentor questions which distance requirement should be used for heath facilities.

Response #3: In order to address the commentor's concerns regarding the conflict between the CBC and CMC, the Office is proposing to amend the CBC, Section 1202.2.1 to make reference to CMC, Section 407.2.2 for requirements that apply to health facilities. Additionally, the Adoption Matrix Table of CBC, Chapter 12 will be modified to indicate that OSHPD adopts the entire UBC, Chapter 12, as amended in Section 1202.2.1, for OSHPD 1, 2, 3 & 4 health facilities. The office's proposed modified text addressing this issue is shown in the "Express Terms" document of this proposed rulemaking OSHPD 2/02.

Comment #4: The commentor proposes that "procedure room" and the ventilation rate for this type of room be added to CMC, Table 4-A.

Response #4: OSHPD believes that the term "procedure room" is too broad. Procedures performed in these rooms can vary; and the pressure relationship requirement for one "procedure" room may be different from another depending on the type of procedure performed within the room.

Comment #5: The commentor states that CMC, Table 4-A appears to have several errors in "Column C". Several rooms, such as the toilet room, have no minimum ventilation air change rate for the room. It is a good opportunity for OSHPD to correct the air change rate to reduce ambiguity in the CMC.

Response #5: Although, CMC, Table 4-A, Column C may appear to be incorrect the Office offers the following clarification. Table 4-A, Column C indicates the number of air changes when 100% outside air is required. It is not the minimum ventilation air change rate requirement. Areas that are left blank in Column C indicate that the corresponding rooms do not require 100% outside air.

DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS

The Office of Statewide Health Planning and Development has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation.

REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

These proposed regulations will not have an adverse economic impact on small businesses. Additionally, there are no rejected proposed alternatives to identify regarding this issue.

COMMENTS MADE BY THE OFFICE OF SMALL BUSINESS ADVOCATE

The OSHPD did not receive any comments from the Office of Small Business Advocate.

COMMENTS MADE BY THE TRADE AND COMMERCE AGENCY

The OSHPD did not receive any comments from the Trade and Commerce Agency.